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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/799,244
Filing Date: March 12, 2004
Appellant(s): FARNWORTH ET AL.

Deepak Malhotra
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed December 8, 2006 appealing from the Office action mailed July 21, 2006.

(1) Real Party in Interest

A statement identifying by name the real party in interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is substantially correct. The changes are as follows: claims 1-5, ***not including claims 24-28***, are rejected under 35 U.S.C. 103(a) as being unpatentable over Kwa, US Patent 4863232, in view of Swirhun et al., US Patent 5631988, hereinafter Swirhun, and Kimmel et al., US Patent 4,704,599, hereinafter Kimmel.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

4863232	KWA	9-1989
5631988	SWIRHUN et al.	5-1997
4704599	KIMMEL et al.	11-1987
4839829	FREEDMAN	6-1989

- Gillingham, Peter "SLDRAM: High Performance, Open Standard Memory", November 1997, IEEE, pp. 29-39.

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kwa, US Patent 4863232, in view of Swirhun et al., US Patent 5631988, hereinafter Swirhun, and Kimmel et al., US Patent 4,704,599, hereinafter Kimmel.

3. In re claim 1, Kwa discloses a system comprising:

- A housing (Figure 1, Item 110).
- A circuit board supported in the housing (Figure 1, Item 114).
- A plurality of slot connectors supported on the circuit board (Figure 1, Item 116).
- A first card in one of the slot connectors (Figure 1, Item 140).
- A first circuit component mounted on the first card (Column 1, Lines 11-22).

- A second card in another one of the slot connectors (Figure 1, Item 140).
- A second circuit component mounted on the second card (Column 1, Lines 11-22).
- An optical interconnect coupling the first card to the second card (Figure 1, Item 130), the first circuit component being configured to communicate with the second circuit component via the optical interconnect (Column 1, Lines 11-22), whereby the optical interconnect does not pass through the slot connectors so that interference that could otherwise be caused by signals to and from the first circuit component is impeded (Column 6, Lines 51-62).

4. Kwa did not disclose the optical interconnect being entirely supported by the first and second cards, and did not provide details as to how the circuitry is powered.

5. Swirhun discloses a system [fig.4a] comprising an optical interconnect [optical fiber ribbon] coupling the first card [400] to the second card [410], the first circuit component [405] being configured to communicate with the second circuit component [415] via the optical interconnect, the optical interconnect being entirely supported by the first and second cards [col.7, ll.5-28].

6. Kimmel teaches a system comprising:

- Insertable cards with supporting a processor and a memory (Column 2, Lines 19-22).
- Supporting a power supply in the housing (Column 1, Lines 17-19).
- Coupling the power supply to the processor [first circuit component] via the first slot connector (Figure 3, Item 106).

7. It would have been obvious to one of ordinary skill in the art, having the teachings of Kwa, Kimmel and Swirhun before him at the time the invention was made, to modify the system

taught by Kwa to include the teachings of Kimmel and Swirhun, in order to obtain the claimed optical interconnect. One of ordinary skill in the art would have been motivated to make such a combination as it provides a way to alleviate misalignment problems due to thermal strain [Swirhun: col.1, l.63 – col.2, l.16] and allow for the removal of a single card in a system containing a plurality of such cards without affecting the remainder of the system [Kimmel: col.1, ll.34-38].

8. Regarding Claim 2, Kwa further discloses optically coupling the first card to the second card comprises using a fiber optic cable (Figure 1, Item 130).

9. Regarding Claims 3-5, Kwa further discloses wherein the optical interconnect comprises a first optical connector, on the first card, configured to convert between electrical signals and optical signals, wherein the system further includes circuit traces on the first card coupling the first optical connector to the first circuit component, wherein the optical interconnect further comprises an optical connector, on the second card, configured to convert between electrical signals and optical signals, the system further including circuit traces on the second card coupling the second optical connector to the second circuit component (Column 1, Lines 11-22; the first and second cards have transmitting and receiving circuitry connected to further circuitry crafted in this matter).

10. Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimmel, Kwa and Swirhun as applied to claim 1 above, and further in view of Gillingham (SLDRAM: High-Performance Open-Standard Memory).

11. Regarding Claims 6 and 7, Kimmel, Kwa and Swirhun taught each and every limitation as discussed above in reference to claims 1 and 24. Kimmel teaches the first or second circuit

component comprises a memory (Column 2, Lines 19-22). Kimmel does not specify the memory device to be a DRAM or a SLDRAM memory device.

12. Gillingham teaches synchronous link DRAM (Pages 29-39 meets the high data bandwidth requirements of emerging processor architectures and retains the low cost of earlier DRAM interface standards (Page 29, Column 1, Paragraph 2).

13. Accordingly, it would have been obvious to a person of ordinary skill in the art at the time of invention to further combine the teachings of SLDRAM as presented by Gillingham into the system so as to make use of memory that can support emerging processor architecture while still maintaining a low degree of cost.

14. Claims 14-16, 18-21, 23, 31-33 and 35-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kwa, in view of Kimmel (4,704,599) and Gillingham (SLDRAM: High-Performance Open-Standard Memory).

15. Regarding Claims 14, 19, 31 and 35, Kwa discloses a method and a computer comprising:

- Supporting a circuit board (Figure 1, Item 114) in a housing (Figure 1, Item 110).
- Supporting a plurality of slot connectors (Figure 1, Item 116) on the circuit board (Figure 1, Item 114).
- Supporting a first circuit component (Column l, Lines 11-22) on a first card (Figure 1, Item 140) having an edge connector (Figure 1, Item 142).
- Inserting the edge connector of the first card into a first one of the slot connectors to support the first card from the circuit board (Column 4, Lines 29-30).

- Providing a second card (Figure 1, Item 140) having an edge connector (Figure 1, Item 142) configured for sliding receipt in a second one of the slot connectors (Column 4, Lines 29-30).
- Supporting a second circuit component (Column 1, Lines 11-22) on a second card having an edge connector.
- Inserting the edge connector of the second card into a second one of the slot connectors to support the second card from the circuit board (Column 4, Lines 29-30).
- Optically coupling the first circuit component to the second circuit component for data communications using an optical interconnect within the housing (Figure 1, Item 130; Column 1, Lines 11-22), wherein the optical interconnect does not pass through the slot connectors (Column 1, Lines 51-62).

16. Kwa does not specify the circuit components to be a processor and a SLDRAM memory and does not provide details as to how the circuitry is powered.

17. Kimmel teaches:

- Having insertable cards with supporting a processor and a memory (Column 2, Lines 19-22).
- Supporting a power supply in the housing (Column 1, Lines 17-19).
- Coupling the power supply to the processor via the first slot connector (Figure 3, Item 106), the coupling including using circuit traces on the first card extending from the edge connector of the first card toward the processor (Figure 3, Item 64).

- Coupling the power supply to the memory via the second slot connector (Figure 3, Item 106), the coupling including using circuit traces on the second card extending from the edge connector of the second card toward the memory (Figure 3, Item 64),

18. Kimmel is motivated to allow for the removal of a single card in a system containing a plurality of such cards without affecting the remainder of the system (Column 1, Lines 34-38).

19. Accordingly, it would have been obvious to a person of ordinary skill in the art at the time of invention to incorporate the teaching of Kimmel into the system disclosed by Kwa and Swirhun for the benefit of allowing single cards in the multiple card system to be removed without affecting the performance of the remainder of the system.

20. Kimmel does not specify the memory device to be a SLDRAM memory device.

21. Gillingham teaches synchronous link DRAM (Pages 29-39) meets the high data bandwidth requirements of emerging processor architectures and retains the low cost of earlier DRAM interface standards (Page 29, Column 1, Paragraph 2).

22. Accordingly, it would have been obvious to a person of ordinary skill in the art at the time of invention to further combine the teachings of SLDRAM as presented by Gillingham into the system so as to make use of memory that can support emerging processor architecture while still maintaining a low degree of cost.

23. Regarding Claims 15, 20, 32 and 36, Kimmel further teaches a third card in a third one of the connectors (Figure 1, Item 18), a co-processor supported by the third card (Column 2, Lines 19-22). Kimmel does not teach coupling the co-processor and processor with an optical interconnect.

24. Kwa further discloses an optical interconnect coupling a first circuit component to the second circuit component (Figure 1, Item 130; Column 1, Lines 11-22).

25. Regarding Claims 16, 21, 33 and 37, Kimmel further teaches conductors coupling the power supply to the co-processor via the third connector (Figure 3, Item 106), the conductors including circuit traces on the third card (Figure 3, Item 64).

26. Regarding Claims 18 and 23, Kwa further discloses including an electronic device in the housing capable of generating electromagnetic interference (Figure 1, Item 142), and wherein the optical interconnect shields communications between the processor and the memory from the electromagnetic interference (Figure 1, Item 142; the electric connections are capable of generating interference, which, by virtue of the optical connection being disposed apart from these electrical connections, are substantially inhibited from interfering with the memory/process intercommunications).

27. Claims 17, 22, 34 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimmel, Gillingham and Kwa as applied to claims 15, 20, 32 and 36 above, and further in view of Freedman (4839829).

28. Kimmel, Gillingham and Kwa taught each and every limitation as discussed above in reference to claims 15, 20, 32 and 36. Kimmel, Gillingham and Kwa did not disclose explicitly a math co-processor.

29. Freedman teaches a math co-processor (Column 5, Lines 66-68) to enhance floating point computational speeds (Column 5, Lines 66-68).

30. Accordingly, it would have been obvious to a person of ordinary skill in the art at the time of the invention to incorporate a math co-processor as taught by Freedman into the system

taught by Kimmel, Gillingham and Kwa for the benefit of enhance floating point computational speeds.

31. Claims 24-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kwa in view of Swirhun.

32. In re claim 24, Kwa discloses a method of assembling a system, the method comprising:

- Supporting a circuit board (Figure 1, Item 114) in a housing (Figure 1, Item 110).
- Supporting a plurality of slot connectors on the circuit board (Figure 1, Item 116).
- Mounting a first circuit component (Column 1, Lines 11-22) on a first card (Figure 1, Item 140).
- Inserting the first card into a first one of the slot connectors (Column 4, Lines 29-30).
- Mounting a second circuit component (Column 1, Lines 11-22) on a second card (Figure 1, Item 140).
- Inserting the second card into a second one of the slot connectors (Column 4, Lines 29-30).
- Flexibly optically coupling the first card to the second card for optical communications between the first circuit component and the second circuit component (Figure 1, Item 130; Column 1, Lines 11-22; the optical coupling is clearly flexible in the figure), whereby the flexible optical interconnect does not pass through the slot connectors so that interference that could otherwise be caused by signals to and from the first circuit component is impeded (Column 6, Lines 51-62).

33. Kwa did not disclose using a first optical connector supported by the first card and completely movable with the first card, a second optical connector supported by the second card

and completely movable with the second card, and an optical cable coupled between the first and second optical connectors.

34. Swirhun discloses a method of assembling a system [fig.4a], the method comprising flexibly optically coupling the first card [400] to the second card [410] for optical communications between the first circuit component [e.g., 405, components on 400] and the second circuit component [e.g., 415, components on 410], using a first optical connector [405] supported by the first card and completely movable with the first card [405 attached to 400], a second optical connector [415] supported by the second card and completely movable with the second card [415 attached to 410], and an optical cable [optical fiber ribbon] coupled between the first and second optical connectors [col.7, ll.5-28].

35. It would have been obvious to one of ordinary skill in the art, having the teachings of Kwa and Swirhun before him at the time the invention was made, to modify the system taught by Kwa to include the teachings of Swirhun, in order to obtain the claimed method. One of ordinary skill in the art would have been motivated to make such a combination as it provides a way to alleviate misalignment problems due to thermal strain [Swirhun: col.1, l.63 – col.2, l.16].

36. Regarding Claim 25, Kwa further discloses optically coupling the first card to the second card comprises using a fiber optic cable (Figure 1, Item 130).

37. Regarding Claims 26-28, Kwa further discloses wherein the optical interconnect comprises a first optical connector, on the first card, configured to convert between electrical signals and optical signals, wherein the system further includes circuit traces on the first card coupling the first optical connector to the first circuit component, wherein the optical interconnect further comprises an optical connector, on the second card, configured to convert

between electrical signals and optical signals, the system further including circuit traces on the second card coupling the second optical connector to the second circuit component (Column 1, Lines 11-22; the first and second cards have transmitting and receiving circuitry connected to further circuitry crafted in this matter).

38. Claims 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kwa and Swirhun as applied to claim 24 above, and further in view of Kimmel (4,704,599) and Gillingham (SLDRAM: High-Performance Open-Standard Memory).

39. Regarding Claims 29 and 30, Kwa and Swirhun taught each and every limitation as discussed above in reference to claim 24. Kwa and Swirhun did not disclose explicitly that the circuit components comprise memory.

40. Kimmel teaches the first or second circuit component comprises a memory (Column 2, Lines 19-22).

41. Kimmel is motivated to allow for the removal of a single card in a system containing a plurality of such cards without affecting the remainder of the system (Column 1, Lines 34-38).

42. Accordingly, it would have been obvious to a person of ordinary skill in the art at the time of invention to incorporate the very well known teaching regarding memory in circuit components of Kimmel into the system disclosed by Kwa and Swirhun for the benefit of allowing single cards in the multiple card system to be removed without affecting the performance of the remainder of the system.

43. Kimmel does not specify the memory device to be a DRAM or a SLDRAM memory device.

44. Gillingham teaches synchronous link DRAM (Pages 29-39 meets the high data bandwidth requirements of emerging processor architectures and retains the low cost of earlier DRAM interface standards (Page 29, Column 1, Paragraph 2).

45. Accordingly, it would have been obvious to a person of ordinary skill in the art at the time of invention to further combine the teachings of SLDRAM as presented by Gillingham into the system so as to make use of memory that can support emerging processor architecture while still maintaining a low degree of cost.

(10) Response to Argument

A. Claims 1-5 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kwa, US Patent 4863232, in view of Swirhun, US Patent 5631988, and Kimmel, US Patent 4,704,599.

Appellant argues primarily about combining Swirhun with Kwa, to teach the limitation "***an optical interconnect being entirely supported by the first and second cards***". Examiner briefly presents the relevant parts of the rejection in the following.

Kwa was used as the primary reference to teach most of the structural elements of a system comprising:

- A housing (Figure 1, Item 110).
- A circuit board supported in the housing (Figure 1, Item 114).
- A plurality of slot connectors supported on the circuit board (Figure 1, Item 116).
- A first card in one of the slot connectors (Figure 1, Item 140).
- A first circuit component mounted on the first card (Column 1, Lines 11-22).
- A second card in another one of the slot connectors (Figure 1, Item 140).

- A second circuit component mounted on the second card (Column 1, Lines 11-22).
- An optical interconnect coupling the first card to the second card (Figure 1, Item 130), the first circuit component being configured to communicate with the second circuit component via the optical interconnect (Column 1, Lines 11-22), whereby the optical interconnect does not pass through the slot connectors so that interference that could otherwise be caused by signals to and from the first circuit component is impeded (Column 6, Lines 51-62).

However, Kwa did not disclose the limitation "***the optical interconnect being entirely supported by the first and second cards***".

Thus, Swirhun was used as the secondary reference to teach a similar system [both systems of Kwa and Swirhun are involved in the field of optical communication] comprising an optical interconnect [optical fiber ribbon] coupling the first card [400] to the second card [410], the first circuit component [405] being configured to communicate with the second circuit component [415] via the optical interconnect, ***the optical interconnect being entirely supported by the first and second cards*** [fig.4a; col.7, ll.5-28].

Finally, the issue is whether one with ordinary skill in the art would be motivated to incorporate the teachings of Swirhun with Kwa, to obtain a system comprising ***the optical interconnect being entirely supported by the first and second cards***. Both Kwa and Swirhun are concerned with the problem associated with coupling the optical interconnects [i.e., fibers] [Kwa: col.1, ll.37-60; Swirhun: col.1, ll.25-30]. It would be apparent to one with ordinary skill in the art that misalignment of optical interconnects would cause operation problems in a fiber communication network [i.e., misguided or loss of light may cause loss of information].

Examiner points to Appellant's admission that Swirhun does solve the issue regarding misalignment problems due to thermal strain [pg.11, 2nd paragraph of appeal brief filed December 8, 2006]. As such, Examiner submits that one with ordinary skill in the art would have been motivated to make such a combination as Swirhun's connectors provide a way to alleviate misalignment problems due to the thermal strain caused by heat generated by optoelectronic devices, circuits, etc. [Swirhun: col.1, l.63 – col.2, l.16].

Appellant argues if "Kwa was modified with the arrangement of Fig. 4a of Swirhun et al., it would not be possible to use the slot connector to couple the first circuit component to a power supply. The slot connector of Fig. 4a of Swirhun et al. is not usable when the optical interconnect is being used". Examiner disagrees with the unsupported general conclusory remark and submits that the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). Examiner submits that one with ordinary skill in the art would have been concerned with misalignment of optical interconnects causing operation problems in a fiber communication network and be motivated to incorporate Swirhun's connectors to alleviate misalignment issues due to the thermal strain caused by the inevitable heat generated by optoelectronic devices, circuits, etc. Incidentally, it is not apparent to Examiner why one with ordinary skill in the art [assumed to be competent] would implement a slot connector that can't be coupled to a power supply [i.e., the circuit components need power in

order to operate] and can't be used when the optical interconnect is being used [i.e., optical interconnect are just fibers that still need power and optoelectronic devices in order to operate].

Appellant argues "Kwa teaches away from any such combination". Examiner disagrees as there is no finding anywhere in Kwa that stipulates *an optical interconnect being entirely supported by the first and second cards* cannot be used with the system. As a matter of fact, Kwa is concerned with coupling the optical interconnects ***conveniently*** [col.1, ll.37-60], a problem shared by Swirhun [Swirhun: col.1, ll.25-30; i.e., ease of making the coupling]. Thus, the teachings of Swirhun is indeed relevant to the problem of coupling the optical interconnects ***conveniently***, as address by Kwa.

Appellant alleges that "the main purpose of Kwa is to avoid the risk of operators forgetting to mate optical connector parts when inserting a circuit board or of forgetting to unmate optical connector parts when removing a circuit board". Firstly, Examiner submits that a thorough reading reveals that Kwa is mainly concerned with coupling the optical interconnects ***conveniently*** [col.1, ll.37-54]. The risk of operators forgetting to ***rotatably*** mate optical connector parts when inserting a circuit board or forgetting to ***rotatably*** unmate optical connector parts when removing a circuit board is almost an afterthought [i.e., moreover] [col.1, ll.55-60]. Secondly, the aforementioned risk was described in the contextual environment where optical connector parts are provided with screw or bayonet fittings that would require tee optical connectors parts to be ***rotatably*** mated. In other words, if the optical connector parts are not provided with screw or bayonet fittings that would require tee optical connector parts [e.g., optical connector parts as taught by Swirhun], then the aforementioned risk of ***rotatably*** mating the tee optical connector parts would be irrelevant. Thus, it is more accurate to assert that the

main purpose of Kwa is to provide a way to couple the optical interconnects ***conveniently***, without the risk associated with ***rotatably*** mating the tee optical connector parts.

Appellant argues that "Kwa would not have any system other than one that provides for automatic alignment of optical connector parts..." Examiner disagrees as Kwa also rejected a system that provides automatic alignment due to congested electrical elements [col.1, l.61 – col.2, l.13]. Kwa did not specifically disclose that the system was rejected due to concerns of optical interconnect misalignment from the thermal strain caused by the heat generated from the congested electrical elements. However, one with ordinary skill in the art, having the teachings of Swirhun before him at the time the invention was made, would have recognized this as a serious issue to be considered [Swirhun: col.1, l.63 – col.2, l.16] in Kwa's system.

Appellant admits that "the problem of alleviating misalignment problems due to thermal strain would appear to be solved by Swirhun et al. alone, without any need to look to Kwa's invention or Kimmel et al." Examiner agrees that Swirhun solves the problem of alleviating misalignment problems due to thermal strain, which is why Kwa needs Swirhun's teachings in order to provide the optical interconnect that would not have the misalignment problems.

B. Claims 6-7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimmel, Kwa and Swirhun, and further in view of Gillingham.

Appellant argues with respect to Kwa as above. As such, Examiner maintains position against Appellant's arguments as discussed above.

Appellant alleges "that the Office's conclusion of obviousness is based on improper hindsight reasoning". Examiner disagrees with the unsupported general allegation and submits

that Examiner's conclusion of obviousness was based on only knowledge within the level of ordinary skill at the time the claimed invention was made.

C. Claims 14-16, 18-21, 23, 31-33 and 35-37 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kwa, in view of Kimmel and Gillingham.

Appellant argues that if "Swirhun et al. were combined with Kwa, it would not be possible to use the first connector to couple the power supply to the processor..." Examiner reminds Appellant that the rejection is based on the combination of Kwa, Kimmel and Gillingham [i.e., Swirhun was ***not*** cited]. Thus, Appellant's arguments are moot.

D. Claims 17, 22, 34 and 38 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kimmel, Gillingham and Kwa, and further in view of Freedman.

Appellant alleges "Kwa teaches away from any such combination". Examiner disagrees with the unsupported general allegation as it is not apparent what aspects of the combination Kwa actually stipulates not to be used with the system.

Appellant alleges "that the Office's conclusion of obviousness is based on improper hindsight reasoning". Examiner disagrees with the unsupported general allegation and submits that Examiner's conclusion of obviousness was based on only knowledge within the level of ordinary skill at the time the claimed invention was made.

E. Claims 24-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kwa in view of Swirhun.

Appellant argues that if "Swirhun et al. were combined with Kwa, it would not be possible to insert the first card into a first one of the slot connectors... position of the optical connector in Fig. 4a of Swirhun et al. prevents use of the slot connector... Swirhun et al. does

not disclose simultaneous use of an edge connector and an optical connector". It appears that Appellant analyzed and argued against the references individually when the rejection was based on a combination. Examiner submits that one cannot show nonobviousness by attacking references individually and that the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. Examiner submits that one with ordinary skill in the art would have been concerned with misalignment of optical interconnects causing operation problems in a fiber communication network and be motivated to incorporate Swirhun's connectors to alleviate misalignment issues due to the thermal strain caused by the inevitable heat generated by optoelectronic devices, circuits, etc. Incidentally, Examiner finds it inconceivable that one with ordinary skill in the art [assumed to be competent], using the combined teachings of Kwa and Swirhun, would design a system with the optical connector blocking the slot connectors or preventing the simultaneous use of an edge connector and an optical connector [i.e., no point in having optoelectronic components].

F. Claims 29-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Kwa and Swirhun, and further in view of Kimmel and Gillingham.

Appellant alleges "Kwa teaches away from any such combination". Examiner disagrees with the unsupported general allegation as it is not apparent what aspects of the combination Kwa actually stipulates not to be used with the system.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Tse Chen

March 23, 2007

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